



Iron Metabolism, Oxidative Stress and Cellular Dysfunction

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Deadline for manuscript submissions:

closed (20 March 2024)

Message from the Guest Editors

In this Special Issue, we critically explore and discuss the importance of iron homeostasis and dysregulation. Iron is an essential mineral fundamental to human life. Excess unbound iron leads to the generation of highly reactive free radicals via Fenton and Haber Weiss chemistry that may promote oxidative stress and consequent cellular dysfunctions. Iron metabolism is therefore regulated by complex integrated homeostatic mechanisms, with any disruption to these fine-tuned processes leading to dysfunction and disease states. Understanding the underlying mechanisms will be pivotal to ‘unfolding’ pathogenic pathways, potentially discovering new therapeutic targets and offering insights into novel biomarkers to detect the early onset of a multitude of disorders. In this Special Issue, we invite researchers to provide original research articles, clinical reports, and review articles that relate to molecular mechanisms and therapeutics or diagnostic strategies focusing on iron metabolism, oxidative stress, and organelle and cellular dysfunction.





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Message from the Editor-in-Chief

It has been recognized in medical sciences that in order to prevent adverse effects of "oxidative stress" a balance exists between prooxidants and antioxidants in living systems. Imbalances are found in a variety of diseases and chronic health situations. Our journal *Antioxidants* serves as an authoritative source of information on current topics of research in the area of oxidative stress and antioxidant defense systems. The future is bright for antioxidant research and since 2012, *Antioxidants* has become a key forum for researchers to bring their findings to the forefront.

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